

## WHICH WAY DID THE ADJECTIVES GO? THE STATIVE SPLIT IN SENECA

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### 1 Introduction

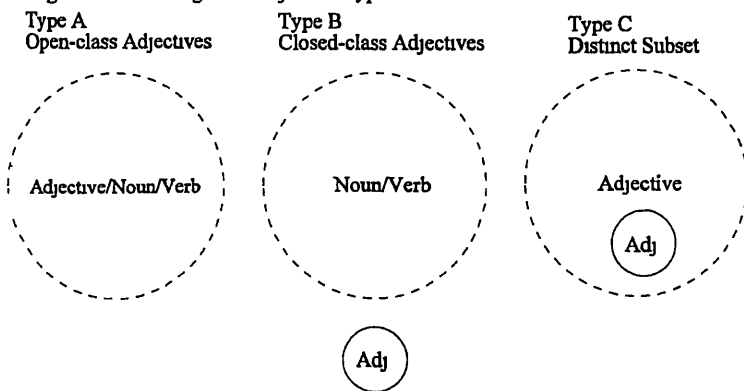
This paper is a comparison of Dixon's theory of closed-class adjectives and the split in stative verbs in Seneca (Iroquoian), with comments on French adjective placement

### 2 Closed vs Open Class Adjectives

Dixon (1977) carried out a cross-linguistic study of descriptive adjectives (not including limiting adjectives such as numbers or determiners). Based on the results of this survey he classified languages into three types. In one type of language adjectival notions form either a large open class, the Adjective class (English, Dyirbal), or a part of the large open classes Noun or Verb (Chinese for the class Verb, Hausa both Noun and Verb) (Dixon 1977:20). In the second type of language adjectival notions form a small closed class (Mulluk-Mulluk, with seven adjectives), tending to around 40-50 members at its largest (many Bantu languages). In the third type of language "that have a major class Adjective, a few members of the class are set off from the rest by virtue of a certain morphological property" (Dixon 1977:22). This group includes Rotuman and Yurok.

These distinctions are represented in figure 1. The dashed lines indicate open boundaries, while the solid lines indicate closed boundaries.

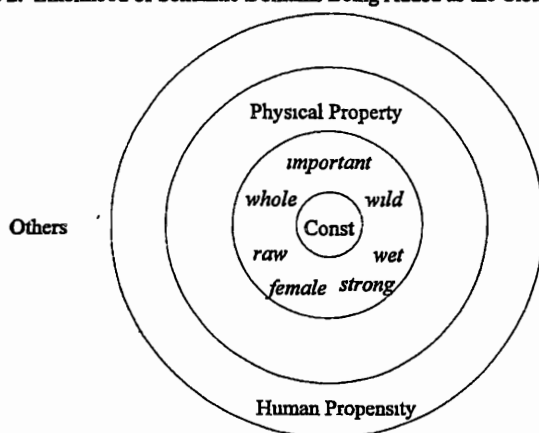
Figure 1 Cross-linguistic Adjective Types



Dixon divided adjectival notions into seven semantic domains (based on English): Dimension

(*large*), Age (*old*), Color (*black*), Value (*good*), Physical Property (*wet*), Speed (*fast*), and Human Propensity (*good-natured*). In even the smallest adjective sets in the second and third types of languages four domains always appeared: Dimension, Age, Color and Value. Languages with larger closed-class sets often included some extra terms, including *female*, *important*, *raw*, *wet*, *whole*, *wild*, etc. As the closed-class sets grew in size they began to include members of other semantic domains, with Physical Properties tending to show up first, Human Propensity terms second. The cross-linguistically closed-class semantic domains of Dimension, Age, Color and Value will be referred to here as **Constrained**. This is represented in figure 2.

Figure 2. Likelihood of Semantic Domains Being Added as the Closed-Class Set Grows



### 3 Extending Dixon's Observations

Dixon observed that the distinction between Constrained and Unconstrained classes operated either a) cross-linguistically, such that languages with a closed class Adjective used that class to code constrained notions, or b) intra-linguistically, such that languages with a closed sub-class of the open class Adjective used that sub-class to code constrained notions morphologically.

This paper will show that the distinction between Constrained and Unconstrained classes is more widespread than previously shown. Furthermore, it need not operate morphologically, but also can operate morphosyntactically (affecting core argument marking in Seneca) or syntactically (affecting Noun/Adjective order in spoken French).

### 4 Seneca (Iroquoian)

In Seneca adjectival notions appear in the Verb class as statives, although not all statives correspond to English adjectives, e.g. *-atkq- possess evil power, be a witch*. Stative verbs are

marked from other members of the Verb class by grammatical aspect limitations these verbs can only appear in the Stative (or Perfect) aspect, while other verbs appear also in the Habitual and Punctual aspects Less than half of the statives take one type of marking (traditionally called Agent), the rest a different marking (traditionally called Patient) Statives taking Agent marking will be referred to as Agent-Statives, and those taking Patient marking as Patient-Statives Since noun incorporation affects this marking only examples without incorporated nouns were examined

The data for Seneca are from Chafe (1967) No studies of this phenomenon in Seneca have previously appeared, although studies of the cognate stative split in other Iroquoian languages include Michelson (1991) for Oneida (where Agent-Statives are analyzed as permanent states, Patient-Statives as temporary states) and Mithun (1991) for Mohawk (where Agent-Statives are inherent states and Patient-Statives possibly temporary resultant or product states) The splits in the three languages are similar, but pattern slightly differently

### 5 Constrained Adjectives and the Distribution of Agent and Patient in Seneca Statives

The first four categories to be examined are the Constrained sets of Dimension, Age, Color and Value Following are the Unconstrained sets

Dixon found that Dimension terms formed part of the constrained category In Seneca there are 14 Dimension terms, all of which take Agent marking These are shown in table 1 *Be all, the whole of* is included here as a Dimension term, although Dixon did not classify it as such. However, he did find that *whole* often appeared as an extra member of the constrained set For this reason *be all, the whole of* is included here

Table 1 Dimension (Constrained)

AGENT (14)		PATIENT (0)
nɪ a-	<i>be of a certain size</i>	
haʔ te ahsɛnq-	<i>be half, in the middle</i>	
te atakwɛhtɛ-	<i>be flat</i>	
nɪ (a/s)ʔáa-	<i>be small</i>	
nɪ (akwa)ʔsʔáa-	<i>be small (several things)</i>	
nɪ akwɛhtaʔáa-	<i>be narrow</i>	
nɪ akʔaa-	<i>be short</i>	
s kaɛti-	<i>be one side</i>	
-kwɛk-	<i>be all, the whole of</i>	
-stɛ-	<i>be big</i>	
nɪ (ta)kaɛ(æ)-	<i>be thin</i>	
-tɛs-	<i>be thick</i>	
-uʔúu-	<i>be tiny</i>	
-ʔɛost-	<i>be one's right (side), the preferred one</i>	

Another constrained category is that of Age In Seneca there are four Age terms, three with Agent marking and one with Patient This is represented in table 2

Table 2 Age (Constrained)

AGENT (3)		PATIENT (1)	
-akayq-	<i>be old (inanimate)</i>	-sth-	<i>be the youngest</i>
-(aw)ase-	<i>be new, young</i>		
-kētsi-	<i>be old (animate)</i>		

The Agent-Statives are normative in that they need not be relative. That is, being old says nothing about the ages of others. On the other hand, the Patient-Stative is relative, in that one can be the youngest only in relation to the ages of others. It should also be noted that the Agent-Stative terms here outnumber the Patient-Statives.

Almost all Seneca Color terms consist of the verb root *-ʔe-* *be the color of* incorporating an appropriately colored noun (blood for red, sky for blue, coal for black, bile or goldenthrall for yellow, ash for gray, rotten wood in a powdery state for brown, scoke for purple, fruit or berry for orange, and in some dialects snow for white). Since, as previously stated, noun incorporation affects Agent vs Patient marking, such Color terms are excluded from this study. However, there are two other Color terms which do not necessarily incorporate a noun. One is an Agent-Stative and the other is a Patient-Stative. This is shown in table 3.

Table 3 Color (Constrained)

AGENT (1)		PATIENT (1)	
-keet-	<i>be white, light-colored</i>	-atak-	<i>be deep, saturated (of a color)</i>

As with the Age category, the Patient-Stative is relative. That is, deepness of color refers to the various colors themselves (which are indicated by incorporating an object with such a color into the verb *be the color of*), rather than the colored object. The Agent-Stative is absolute in that it can be said of an object itself.

The last constrained category found by Dixon is that of Value. Although the numbers of Agent-Statives and Patient-Statives in this category are equal, as shown in table 4 on the next page, their meanings are slightly different.

Table 4 Value (Constrained)

AGENT (7)		PATIENT (7)	
-aetkē-	<i>be bad</i>	-atyanqht-	<i>be funny, cute</i>
-ahtyawec-	<i>be taboo</i>	-etetkaet(e)-	<i>be pleasant, fun</i>
-te atqetsyó-	<i>be necessary</i>	-kaʔq-	<i>be good, pleasing, taste good</i>
-(aw)iyó-	<i>be good, beautiful</i>	-néʔwaæt-	<i>be nasty, revolting</i>
-(h)etkē-	<i>be bad, evil, ugly</i>	-skaæʔt-	<i>taste funny</i>
s inq-	<i>be well, good, healthy</i>	-yēst-	<i>be attractive in appearance</i>
t yei-	<i>be right, proper, real, complete</i>	-kwäst-	<i>be auspicious (time or weather)</i>

The Agent-Statives are normative, in that what is taboo, good or evil, or proper is a function of

societal decisions rather than personal opinion. On the other hand, the Patient-Statives are evaluative, such that individuals decide what is fun, or good or bad tasting. Being auspicious is evaluative in that, for example, what might be good weather for fishing might not be good weather for planting or harvesting.

There is another Agent-Stative, *-kwęnyo-* *be central, the most important*, which could logically be included here. It has been left out of the chart because Dixon found *important* to be an extra member of the constrained set.

The first Unconstrained category is Physical Properties. This category is divided into sub-categories here, the first of which is Qualities. There are 18 Patient-Statives in the Qualities category, and no Agent-Statives. This is shown in table 5.

Table 5 Physical Property - Qualities (Unconstrained)

AGENT (0)	PATIENT (18)
	<i>-áhse-</i> <i>be fat</i>
	<i>-Cæhtá:ne-</i> <i>be itchy</i>
	<i>-hæʔthę-</i> <i>have gray hair</i>
	<i>te (h:/)yoʔtsíst-</i> <i>be sour</i>
	<i>-C/wi-</i> <i>be ripe, cooked, done</i>
	<i>-tsrwak-</i> <i>be sour, bitter</i>
	<i>-kešt-</i> <i>be depleted, used up, gone by</i>
	<i>-konyęs-</i> <i>be neat, tidy</i>
	<i>-nóqkt(e/a)-</i> <i>be sore, hurt, feel sick</i>
	<i>-owe-</i> <i>be wholly, entirely</i>
	<i>te stææthe-</i> <i>be shiny</i>
	<i>-st(e/a)-</i> <i>be heavy</i>
	<i>-swatę-</i> <i>(be a) woman's costume</i>
	<i>-tét-</i> <i>be rough, strong</i>
	<i>-tki-</i> <i>be dirty</i>
	<i>te. (t)okehq-</i> <i>be square</i>
	<i>-(y)óhkwáʔt-</i> <i>itch</i>
	<i>-ʔtqhkóę-</i> <i>have a fever</i>

It should be noted that all the members of this Unconstrained class are Patient-Statives. Two Agent-Statives, *-ateʔtsiatha-* *be very strong* and *-ʔhaste-* *be strong*, are among Dixon's extra Constrained members, and so are left out of this chart.

The next category is Form/Shape, a subset of Physical Property. Although there is one Agent-Stative, there are 15 Patient-Statives, as shown in table 6 on the next page.

Table 6 Physical Property - Form/Shape (Unconstrained)

AGENT (1)	PATIENT (15)
-tokɛ- <i>be straight, exact, specific, the same</i>	-askaʔshɔʔq- <i>be barefoot</i>
	-atɛtɛ- <i>be loose</i>
	-athyoskwat- <i>be a corner</i>
	-atɔskwi- <i>be wrinkled</i>
	-ekɛ- <i>be the mouth of a stream</i>
	te (ha)kwɛtɛ- <i>be an opening</i>
	-(h/ʔ)ni(y)(e/æ)- <i>be solid, firm, hard, tough</i>
	-(h/ʔ)yakahuyɛht- <i>be sharp (pointy)</i>
	-(h/ʔ)yoʔthuyɛht- <i>be sharp (edged)</i>
	-ki- <i>be soup</i>
	-oʔkaɛtɛ- <i>bulge</i>
	te swɛt(e/a)- <i>be hollow</i>
	-(ta)kaɛq- <i>be stiff</i>
	-tsiʔkwat- <i>be bent, crooked</i>
	te tsiʔskwɛ- <i>be puckered, shriveled</i>

This Unconstrained category consists almost solely of Patient-Statives

A category not addressed by Dixon is that of Race/Gender, which he would probably subsume under Physical Properties. Three Race/Gender terms are given in table 7

Table 7 Race/Gender

AGENT (3)	PATIENT (0)
-(h/ʔ)nyqʔq- <i>be [of European descent]</i>	
-(h)ɔʔtsi- <i>be [of African descent]</i>	
-tsinq- <i>be male</i>	

Note that there are no Patient-Statives of Race/Gender. Another Agent-Stative -iq- *be female* is one of Dixon's extra Constrained members, and so is not present in the table. It is hypothesized that the extra Constrained term influenced the marking of the three other terms in this limited category.

The next Unconstrained category, also not addressed by Dixon, is here called Meteorological. This category would probably be subsumed under Physical Properties by Dixon. The 13 Patient-Statives in this category are shown in table 8 on the next page.

Table 8 Meteorological

AGENT (0)	PATIENT (13)
	-ahtsɪʔk(e/æ)- <i>be cloudy</i>
	-athowe- <i>be cold (weather)</i>
	-aste- <i>be evaporated</i>
	-(aʔ)taɪɛ/(a)- <i>be hot, warm</i>
	-Cænqwe- <i>be wet</i>
	-(i)hɛ- <i>be dry</i>
	te (C)iskwát- <i>be slippery</i>
	-nésto- <i>be frozen</i>
	te qko- <i>be wet</i>
	-sáʔ- <i>(be dew, light frost)</i>
	-tokáʔt- <i>be clear</i>
	-ʔaye- <i>be dewy</i>
	-ʔsko(ʔ)táht- <i>be scorching hot</i>

Note that there are no Agent-Statives

The next category is Position/Orientation (probably Physical Properties per Dixon) In this category there are 22 Agent-Statives and three Patient-Statives, as shown in table 9 on the next page

Another category unaddressed by Dixon is that of Freedom, which is of cultural significance to speakers of Seneca. The members of this category are given in table 10

Table 10 Freedom

AGENT (2)	PATIENT (0)
-atatwəniyo- <i>be free, independent</i>	
-shenɛ- <i>be tame, domesticated, cultivated</i>	

Note that there are no Patient-Statives Another Agent-Stative -nyo- *be wild, uncultivated* is one of Dixon's additional Constrained members It is hypothesized that the extra Constrained term influenced the marking of the other two terms in this limited category

Table 9 Position/Orientation

AGENT (22)		PATIENT (3)	
-ahkwaw-	<i>be wrapped in a blanket</i>	-Cæʔka(e/æ)-	<i>be leaning against</i>
te ahsia/æ-	<i>be hemmed in, stuffed in</i>	-Cəʔthq-	<i>be with or next to</i>
-at-	<i>be inside</i>	-kwə(ə)-	<i>be in a particular spot, place</i>
te .atCe/y-	<i>be apart, separated</i>		
s ati-	<i>be on the other side of, beyond</i>		
te atokə-	<i>be between</i>		
te áʔha/æ-	<i>protrude through an opening</i>		
-ʔ(h)əte-	<i>be in the lead</i>		
-kaite-	<i>be on a slant</i>		
-ate kháq-	<i>be side by side</i>		
-kəq-	<i>have one's head resting on something</i>		
-ne-	<i>be pregnant</i>		
te nowætq-	<i>be secluded</i>		
-nqh(e)-	<i>be full</i>		
te okə-	<i>be between, among</i>		
-séhtq-	<i>have a tick on one's body</i>		
-ʔəhsə-	<i>be at home</i>		
-ʔnqht-	<i>be in, inside</i>		
-(ata)kwəhta-	<i>lay out flat</i>		
te .ʔ(h)akahat-	<i>be lying on one's back</i>		
	<i>with legs spread apart</i>		
-hsia/æ-	<i>stand in array, form an</i>		
	<i>organized group</i>		
-nqke-	<i>be present in</i>		
	<i>abundance, dwell together in a group</i>		

Note that Agent-Statives far outnumber the Patient-Statives

A small number of Agent and Patient-Statives seem to form contrast pairs, as shown in table 11

Table 11 Contrast Pairs

AGENT		PATIENT	
-ak(t)-	<i>be near</i>	ní we-	<i>be far, be a certain distance</i>
-ʔ(h)a/əqow-	<i>be holding, have</i>	-awə-	<i>belong to</i>
-(w)eso-	<i>be much, many</i>	-sthq/w(a)-	<i>be few, little</i>
te ká:n(e/æ)-	<i>look at, see</i>	-athq(ɔ)te-	<i>hear, listen</i>
-ihtsiw-	<i>be apparent (seem, inference)</i>	-yētet-	<i>be apparent (from physical evidence)</i>
-enq-	<i>be different</i>	te yētáhk-	<i>be similar</i>

Contrast pairs do not follow from a correlation of Constrained vs Unconstrained classes and Agent vs Patient marking. A possible explanation would be a historical motivation. That is, perhaps



at some point the use of Agent and Patient marking in statives was to distinguish members of contrast sets. Such a hypothesis requires comparative research.

Miscellaneous terms, the next category, would by definition be open-class, and therefore Unconstrained. In Seneca such terms are Patient-Statives, as shown in table 12.

Table 12 Miscellaneous

AGENT (0)	PATIENT (10)
	-ahtyqht- <i>be frightening, startling</i>
	-atoha- <i>be in confusion, disarray</i>
	-atq:wita?t- <i>rock (back and forth)</i>
	-hse- <i>ride on the back of an animal</i>
	-(Cih)ka- <i>be making a noise, be shouting</i>
	-(Cih)kaé?ni- <i>be noisy</i>
	-kéhte- <i>carry on the back</i>
	-oská/a(ʔa)- <i>be only, nothing but</i>
	-shæté? - <i>be well attended</i>
	-thq- <i>be the one</i>

Human Propensity is one of Dixon's Unconstrained categories. The five agent-Statives and 17 Patient-Statives in this category are listed in table 13.

Table 13 Human Propensity (Unconstrained)

AGENT (5)	PATIENT (17)
-nqe- <i>like, be content with</i>	-ahkiwe- <i>perform the Dance for the Dead</i>
-nqka- <i>be whistling</i>	-ahsawee- <i>be unsociable, retiring</i>
-syóç- <i>be reckless, bold</i>	-atí?kyq- <i>be shy, bashful</i>
-ʔéhq- <i>be busy</i>	-atké?ni- <i>be critical</i>
-yó?te- <i>take one's time</i>	-atkq- <i>possess evil power, be a witch</i>
	-atwənowe- <i>ridicule, make fun of</i>
	-atyeá?t- <i>be weak, submissive, incompetent</i>
	-Ció?te-/yoó?te- <i>be working</i>
	-ç nowe- <i>be a liar</i>
	-nóste- <i>be selfish (about), hold dear, not want to part with</i>
	-nó?khwe- <i>be quick-tempered</i>
	-sheya(C)- <i>be jealous</i>
	-wəné?t- <i>be melancholy, depressed</i>
	-yane- <i>be a chief, sachem</i>
	te yənotaké? - <i>be busy</i>
	-?mikóht- <i>be wise, informed, virtuous</i>
	te . ?nyotaké? - <i>be busy</i>

It should be noted that the Patient-Statives far outweigh the Agent-Statives. The Patient-Statives

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are also perhaps more socially relevant.

A summary of the distribution of Agent and Patient-Statives correlated with Dixon's categories follows in table 14

Table 14 Seneca Summary

AGENT	PATIENT
Dimension	----
normative Age	relative Age
normative Value	evaluative Value
----	Physical Property - Qualities
----	Physical Property - Form/Shape
Race/Gender	----
----	Meteorological
Position/Orientation	----
Freedom	----
----	Miscellaneous
----	Human Propensity

#### 6 Constrained Adjectives and French Noun-Adjective Order

In spoken French most adjectives occur after the noun they modify, as in examples (1a) and (1b)

(1a) un chien rapide  
ART dog fast  
*a fast dog*

(1b) un chien stupide  
ART dog stupid  
*a stupid dog*

Some, however, occur before the noun, as in (2a) and (2b)

(2a) un petit chien  
ART little dog  
*a little dog*

(2b) un joli chien  
ART pretty dog  
*a pretty dog*

Finally, some may occur in either position but with a change in meaning, as in (3a) and (3b)

(3a) une ancienne église  
ART former church  
*a former church*

(3b) une église ancienne  
ART church ancient  
*an ancient church*

The changeable class varies considerably in size, depending on style and speaker literacy. The more formal, literary, or poetic the style, the larger this variable class becomes. Due to the strong literary (i.e., prescriptive) influence on the changeable adjectives, the focus here is on pre-nominal adjective placement in spoken French.

Around fifteen common adjectives appear pre-nominally. These can be divided into three of the

four Constrained categories, as shown in table 15

Table 15 Spoken French Pre-nominal Adjectives

AGE (3)		DIMENSION (8)		VALUE (4)	
jeune	<i>young</i>	bas	<i>low</i>	beau	<i>beautiful</i>
nouveau	<i>new</i>	bref	<i>brief</i>	bon	<i>good</i>
vieux	<i>old</i>	court	<i>short</i>	joli	<i>pretty</i>
		gros	<i>big/fat</i>	mauvais	<i>bad</i>
		haut	<i>high</i>		
		large	<i>broad</i>		
		long	<i>long</i>		
		petit	<i>little</i>		

It may be noted that the fourth category, Color, is not pre-nominal. However, this is only true synchronically. Until the 16th century Color terms patterned with these Age, Dimension, and Value terms.

Semantic domains covering Dixon's Unconstrained categories tend to have post-nominal adjectives. A handful of examples are given in table 16.

Table 16 Unconstrained Categories

PHYSICAL PROPERTY		SPEED		HUMAN PROPENSITY	
aigre	<i>sour/bitter</i>	rapide	<i>fast</i>	stupide	<i>stupid</i>
chaud	<i>hot</i>				

The spoken French data are summarized in table 17, which places the semantic categories under the syntactic categories.

Table 17. French Summary

PRE-NOMINAL	POST-NOMINAL
Age Dimension Value	Color Physical Property Speed Human Propensity

## 7 Conclusion

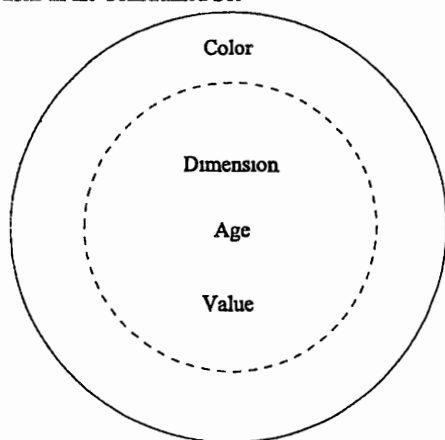
Dixon's cross-linguistic observation is of interest because it shows that what may be treated as closed-class in one language can be considered open-class in another. Further observation shows

that the Constrained adjectival notions need not be just morphologically distinct, as in Dixon's third type of language in section 2. They can also be morphosyntactically or syntactically distinct in languages where adjectival notions are open-class. Furthermore, the Constrained/Unconstrained distinction can appear in languages without an Adjective class at all.

Since the Constrained categories receive special treatment, it appears that these categories have special status. This special status itself may have some cognitive basis.

Since Color does not pattern with the other Constrained categories in either Seneca or French, Color may be peripheral to the other Constrained categories. This is shown in figure 3.

Figure 3. Distinctions in the Constrained Set



### 8 Further Research

Comparative research may clarify the historical status of the contrast sets within Iroquoian. It may also shed light on how the Constrained/Unconstrained distinction began affecting the Agent/Patient distinction.

Cross-linguistically, analyses of more languages with respect to how Constrained and Unconstrained adjectives pattern can reveal how common the phenomenon is, as well as how varied the manifestations are. Such analyses can also clarify whether or not Color terms are less constrained than Dimension, Age and Value.

Data from acquisition, through the investigation of the status of adjectival notions in young children's pivot classes may shed light on how early the distinction can arise.

## 9 References

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